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Claims

1. A method of processing calls in an automatic call distributor, such method comprising the steps of:
learning a set of desired resource relationships
5 for servicing a plurality of call processing load conditions in the automatic call distributor; and
distributing resources of the automatic call distributor based upon call processor loading and the learned set of resource relationships.
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2. The method of processing calls as in claim 1 wherein the step of distributing resources further comprises adjusting a ratio of inbound calls to
15 outbound calls based upon the operating level of the automatic call distributor.
3. The method of processing calls as in claim 1 wherein the step of distributing resources further
20 comprises reassigning an agent of a first group to a second group.
4. The method of processing calls as in claim 1 wherein the step of learning the set of desired
25 resource relationships further comprises determining a number of call that have been answered and are in a queue waiting to be assigned to an agent.
5. The method of processing calls as in claim 1 wherein the step of learning the set of desired
30 resource relationships further comprises determining a number of available agents.

6. The method of processing calls as in claim 1 wherein the step of learning the set of desired resource relationships further comprises determining an average call waiting time of a call in a call queue.

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7. The method of processing calls as in claim 1 wherein the step of learning the set of desired resource relationships further comprises determining an average call waiting time of a call for each group of a plurality of agent groups of the automatic call distributor.

8. The method of processing calls as in claim 1 wherein the step of learning the set of desired resource relationships further comprises determining a number of calls in a call queue for each group of a plurality of agent groups of the automatic call distributor.

9. The method of processing calls as in claim 1 wherein the step of learning the set of desired resource relationships further comprises determining an average waiting time between call arrival at the automatic call distributor and call acceptance.

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Sub B2 } 10. Apparatus for processing calls in an automatic call distributor, such apparatus comprising:

means for learning a set of desired resource relationships for servicing a plurality of call processing load conditions in the automatic call distributor; and

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Concluded

means for distributing resources of the automatic call distributor based upon call processor loading and the learned set of requirements.

5 11. The apparatus for processing calls as in claim 10 wherein the means for distributing resources further comprises means for adjusting a ratio of inbound calls to outbound calls based upon the loading level of the automatic call distributor.

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12. The apparatus for processing calls as in claim 10 wherein the means for distributing the resources further comprises means for reassigning an agent of a first group to a second group.

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13. The apparatus for processing calls as in claim 10 wherein the means for learning the set of desired resource relationships further comprises means for determining a number of calls that have been answered
20 and are in a queue waiting to be assigned to an agent.

14. The apparatus for processing calls as in claim 10 wherein the means for learning the set of desired resource relationships further comprises means for
25 determining a number of available agents.

15. The apparatus for processing calls as in claim 10 wherein the means for learning the set of desired resource relationships further comprises means for
30 determining an average call waiting time of a call in a call queue.

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16. The apparatus for processing calls as in claim 10 wherein the means for learning the set of desired resource relationships further comprises means for determining an average call waiting time of a call for
5 each group of a plurality of agent groups of the automatic call distributor.

17. The apparatus for processing calls as in claim 10 wherein the means for learning the set of desired
10 resource relationships further comprises means for determining a number of calls in a call queue for each group of a plurality of agent groups of the automatic call distributor.

18. The apparatus for processing calls as in claim 10 wherein the means for learning the set of desired resource relationships further comprises means for determining an average waiting time between call arrival at the automatic call distributor and call
20 acceptance.

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B3 19. Apparatus for processing calls in an automatic call distributor, such apparatus comprising:
a neural network adapted to learn a set of desired
25 resource relationships for servicing a plurality of call processing load conditions in the automatic call distributor, and
a call processor adapted to distribute resources based upon call processor loading and the learned set
30 of relationships.

20. The apparatus for processing calls as in claim 19 wherein the call processor adapted to distribute resources further comprises a proportioning processor adapted to adjust a ratio of inbound calls to outbound
5 calls based upon the loading level of the automatic call distributor.

21. The apparatus for processing calls as in claim 19 wherein the call processor adapted to distribute
10 resources further comprises a group processor adapted to reassign an agent of a first group to a second group.

22. The apparatus for processing calls as in claim 19
15 wherein the neural processor further comprises a call counter adapted to determine a number of calls that have been answered and are in a queue waiting to be assigned to an agent.

20 23. The apparatus for processing calls as in claim 19 wherein the neural processor further comprises an agent activity processor adapted to determine a number of available agents.

25 24. The apparatus for processing calls as in claim 19 wherein the neural processor further comprises a call timer adapted to determine an average call waiting time of a call in a call queue.